

Trash in Tampa Bay: What We Find, Where We Find It, and How It Reaches Our Water

An independent research report examining litter, debris pathways and prevention opportunities across the Tampa Bay region.

Thank Your Water — September 2026

1. Executive Summary

Trash found in Tampa Bay's waterways is part of a larger system connecting human activity on land with stormwater infrastructure, rivers, creeks, canals and coastal waters. Litter discarded on streets, sidewalks, parking lots and other developed areas can be transported by rainfall and stormwater into local waterways, while boating, fishing and waterfront activity provide additional pathways for debris to enter the aquatic environment.

This report brings together findings from litter monitoring, interception, cleanup and research programs across the Tampa Bay region to examine what types of trash are being found, where they are being collected, how they reach the water and what is already being done about them. The available evidence identifies plastics as a major component of the region's litter stream, alongside food packaging, cigarette waste, beverage containers, fishing-related debris and other consumer waste. Local observations also suggest that litter composition can differ between locations and surrounding patterns of human activity.

Tampa Bay already has a substantial network of responses. Local governments, environmental organizations, researchers and volunteers are removing debris from waterways and shorelines, intercepting litter in storm drains and smaller waterways, monitoring what is collected, recovering specific waste streams and promoting source reduction. These efforts demonstrate the value of addressing litter at multiple stages: from removing debris already in the environment to preventing it from reaching the water in the first place.

At the same time, the available data have important limitations. Programs cover different locations, use different collection and sampling methods, and report results using measurements that cannot simply be combined into a single regional total. Where litter is collected also does not necessarily reveal where it originated. Existing data can show that

plastics are widespread, for example, without consistently identifying how much of that plastic consists of particular products such as beverage containers or water bottles.

These gaps point toward the next stage of research: connecting litter observations with land use, human activity, stormwater infrastructure and specific waste streams to better distinguish where debris accumulates from where it may be entering the system. Better location-specific data could help Tampa Bay target prevention efforts more effectively and move farther upstream: from repeatedly removing litter to preventing more of it from becoming water pollution at all.

2. Why Study Trash in Tampa Bay?

Trash discarded on land does not always stay where it was left. Across the Tampa Bay region, litter from streets, sidewalks, parking lots and other developed areas can be carried by rainfall and stormwater into drains, canals, creeks and rivers that ultimately connect to Tampa Bay and surrounding coastal waters. Tampa Bay Estuary Program notes that approximately 80% of marine debris originates on land, making litter prevention far more than an issue of neighborhood appearance; it is also a water-quality and ecosystem issue.¹

Local cleanup and interception programs demonstrate the scale of the problem. The City of Tampa's Litter Skimmer operates throughout waterways including the Hillsborough River, Seddon Channel, Garrison Channel, Ybor Channel, Sparkman Channel, Bayshore, East Bay Channel, portions of Tampa Bay, McKay Bay and the Tampa Bypass Canal. Among the debris commonly encountered are water bottles, plastic bags, chip bags, caps and straws.² By July 2025, the vessel had removed more than 94,000 pounds of debris since beginning operations in 2022.³

Other monitoring efforts show that the problem extends across the region. Tampa Bay Estuary Program and its partners have used litter-interception devices and standardized monitoring to study debris at sites in Hillsborough, Pinellas and Manatee counties, finding that plastic-based items dominated most collections.¹ In Pasco County, UF/IFAS's Operation TRAP uses multiple types of interceptor devices to capture and document litter before it enters coastal waterways.⁴

Studying this debris helps answer questions that cleanup totals alone cannot: What kinds of trash are entering Tampa Bay's environment? Where is it being found? How does it move from land into water? Are certain locations or activities associated with particular types of litter? And where might prevention have the greatest impact?

Understanding those patterns matters because removing trash after it reaches a river, shoreline or bay addresses only the end of the pathway. Local monitoring can also help identify opportunities to prevent waste from entering that pathway in the first place. By bringing together findings from litter monitoring, cleanup programs, interception projects and scientific research across the Tampa Bay region, this report examines what is currently known about the area's trash problem, and what the available evidence still cannot tell us.

3. How We Researched Tampa Bay's Litter

This report brings together data and findings from litter-monitoring, interception and cleanup programs operating across the Tampa Bay region. Sources include the Tampa Bay Estuary Program's Trash Free Waters initiative, the City of Tampa's Litter Skimmer program, UF/IFAS Operation TRAP, local cleanup organizations and other governmental, nonprofit and academic research. Where available, site-level data and standardized litter assessments are used alongside broader cleanup totals and program reports.

These sources do not all measure litter in the same way. Some report the total weight of debris removed, while others count and categorize individual pieces of litter. Interceptor devices such as storm-drain traps and Watergoats measure debris captured at specific points in the stormwater or waterway system, while volunteer cleanups document material collected across beaches, shorelines, parks and other public spaces. As a result, a pound of debris collected during a cleanup cannot be directly compared with an individual-item count from a storm-drain trap.

Some of the region's monitoring programs use the U.S. Environmental Protection Agency's Escaped Trash Assessment Protocol (ETAP), a standardized method for identifying, categorizing and comparing litter by material and item type.⁵ ETAP can also document characteristics of a site and its surroundings that may help researchers understand the conditions associated with litter at a particular location. The Tampa Bay Estuary Program uses ETAP to develop litter profiles from its Trash Free Waters collection devices.¹

Sampling methods also create limitations. For example, some interception projects collect more debris than can reasonably be categorized item by item. Operation TRAP has reported that, during high-volume Watergoat cleanouts, researchers may sort and count a subset of collected bags to characterize the types of litter being captured rather than count every individual item.⁶ Tampa Bay Estuary Program similarly notes that detailed categorization can be based on sampled bags when collection volumes are high.¹ These measurements are useful for identifying litter composition and patterns, but should not automatically be interpreted as complete counts of every item captured.

For that reason, this report treats each dataset according to what it can reliably show. Cleanup weights are used to describe the scale of removal; item counts help identify common types of litter; monitoring and interception sites help reveal where debris accumulates or travels; and scientific studies provide additional evidence about plastic contamination in Tampa Bay's environment. Where methods or geographic coverage differ, the findings are presented separately rather than combined into a single regional total.

4. What Types of Trash Are Found?

Trash collected across the Tampa Bay region ranges from small consumer items to large debris, but plastics consistently emerge as a major component of the litter documented by local monitoring programs. Tampa Bay Estuary Program's Trash Free Waters project separates collected debris into five broad material categories: plastic, paper, glass, metal and other. The program reports that plastic-based items dominated most of its monitored collections in Hillsborough, Pinellas and Manatee counties. Based on those results, TBEP identifies reducing and eliminating plastics, including single-use plastics, as a primary strategy for controlling litter in the Tampa Bay watershed.¹

More detailed monitoring shows that "plastic" can represent many different types of everyday waste. Operation TRAP researchers document litter by material and item type, allowing broad material categories to be examined alongside more specific forms of debris. Researchers working with the project have observed food packaging, beverage bottles and cigarette butts more frequently in higher-traffic areas than at suburban monitoring locations.⁷

Operation TRAP's first-year results provide an example of how individual items can dominate particular collection methods. During Operation TRAP's first year, 49 storm-drain trap cleanouts recorded 696 cigarette butts, 345 plastic pieces, 282 pieces of construction material and 194 paper items among the most frequently found categories. Its Watergoat collections told a somewhat different story: nearly 780 pounds of trash and organic debris were removed during 12 monthly cleanouts, while Styrofoam pieces were the most frequently counted item within the sampled bags, with 337 pieces recorded.⁶

Tampa's waterways show many of the same consumer-waste categories. The City of Tampa reports that its Litter Skimmer commonly encounters water bottles, chip bags, plastic bags, caps and straws, in addition to larger debris such as dock material, logs and palm fronds.² The mix illustrates an important distinction in local debris data: not everything removed from Tampa Bay-area waterways is human-made litter. Some programs report

trash together with natural debris, making item-level categorization important when evaluating the composition of what is actually being collected.

5. Where Is Trash Being Found?

Trash monitoring across the Tampa Bay region shows that debris is being collected in a variety of environments, including storm drains, creeks, rivers, channels, shorelines and coastal waterways. The locations where litter is recovered, however, do not necessarily identify where that litter originated. Stormwater, tides and flowing water can transport debris away from the place where it first entered the environment, while interception devices intentionally concentrate debris that might otherwise continue downstream.

In Tampa, the City's Litter Skimmer removes floating debris from Tampa waterways, while the smaller Little Skimmer collects debris from the Hillsborough River, Seddon Channel, Garrison Channel, Ybor Channel, Sparkman Channel, Bayshore, East Bay Channel, portions of Tampa Bay, McKay Bay and the Tampa Bypass Canal.² The City has also completed a citywide litter study specifically to identify litter hotspots and develop data-driven reduction strategies.³ While the City publicly confirms that these hotspots were identified, the detailed results of that study have not yet been incorporated into this report.

In Pasco County, Operation TRAP places litter-interception devices within pathways that can carry debris toward coastal waters. The broader project uses multiple types of interceptor devices to capture debris entering waterways through drainage systems and boat-access points. Since July 2024, more than 40 devices have been installed across Pasco County and Cedar Key.⁴ The project's interactive dashboard maps individual monitoring locations and allows users to examine the types and amounts of debris captured at specific sites over different date ranges.⁴

Importantly, Operation TRAP researchers have observed differences between the environments surrounding their monitoring locations. During field work, one project researcher reported less mishandled litter at suburban sites, while areas with heavier traffic contained consumer waste such as food packaging, beverage bottles and cigarette butts.⁷ Although this observation alone does not establish a regional cause-and-effect relationship, it suggests that surrounding land use and human activity may help explain why certain types of litter appear more frequently at some locations than others.

Across the broader Tampa Bay watershed, Tampa Bay Estuary Program's Trash Free Waters initiative adds another geographic layer by monitoring litter-interception devices in Hillsborough, Pinellas and Manatee counties.¹ Rather than representing a complete

census of litter throughout those counties, these monitoring sites provide snapshots of the debris moving through or accumulating at particular locations. Together with cleanup records and other interception programs, they help reveal how litter conditions can differ across the watershed.

6. How Trash Reaches Tampa Bay's Water

Much of the trash found in Tampa Bay's waterways begins on land. Rain falling on hard, impermeable surfaces such as roads, rooftops, sidewalks and parking lots becomes stormwater runoff. As that water moves across developed areas, it can pick up litter left on streets and other surfaces and carry it into storm drains. Unlike wastewater, stormwater in these systems can be conveyed directly toward local waterways without treatment, creating a pathway for land-based litter to reach creeks, rivers, canals and ultimately Tampa Bay. Tampa Bay Estuary Program reports that approximately 80% of marine debris originates on land and identifies stormwater as a primary route by which that debris enters local waters.¹

The City of Tampa describes the same process locally. Litter that is intentionally discarded or simply blown by wind can be washed into stormwater drains, which empty into streams, rivers, bays and other waterways.² Rain collects land-based litter and carries it through storm drains that empty into waterways. Once trash reaches the water, currents, wind and other conditions can move it quickly from where it first entered, making the location where debris is eventually found different from its original source.²

Storm drains are not the only pathway. Litter can also enter waterways through drainage systems and boat access points. Operation TRAP specifically targets these pathways using boom catchment devices, storm-drain traps and monofilament tubes to intercept litter and reduce the amount of marine debris entering Florida's coastal waters.⁸

These pathways mean that litter found along a shoreline or captured in a waterway does not necessarily originate beside that water. A plastic bottle discarded in a parking lot, for example, may move through a storm drain and downstream before being captured or deposited elsewhere.¹ Conversely, debris associated with boating, fishing or waterfront recreation may enter the aquatic environment much closer to where it is eventually found. Understanding these different pathways is important when deciding whether the best response is cleanup, interception or prevention at the source.

7. What Tampa Bay Is Already Doing About It

Tampa Bay's response to litter includes more than removing trash after it reaches a shoreline. Local governments, environmental organizations and research programs are using a combination of cleanup, interception, monitoring, recycling, public education and source-reduction strategies to address debris at different points along its path to the water.

One regional effort is the Tampa Bay Estuary Program's Trash Free Waters initiative, which focuses on preventing waste at its source while also studying and removing debris already moving through the watershed. TBEP and its partners use litter-interception devices and standardized monitoring to characterize what is being captured and identify strategies for reducing marine debris.¹ The program's broader goal is not simply to collect trash, but to use what is learned from monitoring to inform prevention and reduction efforts.

In Tampa, the City's Litter Skimmer removes floating debris from the Hillsborough River and connected waterways, while the smaller Little Skimmer, introduced in 2025, allows crews to reach shallow areas, seawalls and mangroves that are more difficult for the larger vessel to access. By July 2025, the original Litter Skimmer had removed more than 94,000 pounds of debris since its launch.³

Keep Tampa Bay Beautiful approaches the problem from several directions in Hillsborough County. Its Trash Free Waters program combines Watergoat litter barriers, volunteer boat cleanups, monofilament fishing-line recovery and its "Only Rain Down the Drain" campaign. Watergoats are installed in smaller waterways and outflow areas to capture debris before it can move into larger waterways. In fiscal year 2022, the organization reported removing 125,986 pounds of aquatic trash through 228 water-based cleanup projects involving 2,435 volunteers and 705 miles of waterways.⁹

Large volunteer cleanups provide another layer of removal and data collection. Keep Tampa Bay Beautiful's 2025 Hillsborough River & Coastal Cleanup involved 1,218 volunteers working across 74 sites and removed 23,515 pounds of trash.¹⁰ Participants can also record individual pieces of litter through Ocean Conservancy's data system, allowing cleanup events to contribute information about the types and locations of debris rather than recording only total weight.¹⁰

In Pasco County, Operation TRAP uses a targeted interception-and-research approach, with devices designed to capture debris before it reaches coastal waters. The broader UF/IFAS-led project, which includes monitoring in Pasco County and Cedar Key, conducts regular cleanouts and records site-level information about the types and quantities of

debris captured.⁴ By June 2026, Operation TRAP had completed more than 750 cleanouts, documenting more than 18,000 pieces of litter from storm-drain traps and more than 3,700 pounds of material from boom catchment devices.⁴

Together, these efforts illustrate several different points of intervention. Cleanups remove litter already present in the environment; interceptors capture debris while it is moving toward larger waterways; monitoring helps identify what is being found and where; recycling programs target specific waste streams; and education and source-reduction programs attempt to prevent litter from entering the system at all. No single approach addresses every stage of the problem, which is why Tampa Bay's existing response increasingly combines removal with prevention and data collection.

8. What the Existing Research Tells Us

Taken together, Tampa Bay's litter-monitoring and interception programs show that aquatic trash is not a single, uniform problem. The amount and type of debris collected vary by location, surrounding activity and collection method. However, several patterns appear repeatedly across the available evidence: much of the debris reaching waterways originates on land, plastics are a significant component of the waste stream, stormwater provides an important transport pathway, and human activity influences what is found at individual sites.^{1,7}

Local monitoring also suggests that where people use the landscape matters. Operation TRAP field observations found less mishandled litter around some suburban locations, while heavier-traffic areas contained consumer waste including food packaging, beverage bottles and cigarette butts.⁷ This does not establish that traffic alone causes higher litter levels, but it supports examining land use, public activity and nearby infrastructure when trying to understand why particular types of debris appear at certain locations.

The research also demonstrates the value of intercepting debris before it reaches larger bodies of water. Storm-drain traps collect litter while it is still moving through drainage infrastructure, while boom devices such as Watergoats capture floating debris in creeks and stormwater channels. Operation TRAP was developed specifically around this approach, using different interception technologies at drainage systems and boat-access points to prevent litter and single-use plastics from reaching coastal waterways.⁸

A broader lesson is that removal alone cannot address the entire problem. Interceptors and cleanup crews can capture material already discarded, but they do not prevent that waste from being generated. EPA's Trash Free Waters program identifies source reduction as a key

strategy for preventing aquatic trash and specifically recommends replacing single-use plastic packaging, bottles and containers with reusable alternatives when possible.¹¹ EPA also develops assessment tools that can help communities characterize escaped trash and use those findings to guide upstream source-reduction decisions.¹²

Finally, the available research shows why better local data matters. Operation TRAP records debris type and amount by individual interceptor site and makes those results available through an interactive dashboard.⁴ That makes it possible to move beyond regional cleanup totals and investigate whether particular locations repeatedly capture particular types of waste.⁴ Similar location-specific monitoring across Tampa Bay could help distinguish places where debris merely accumulates from places where prevention efforts may be able to reduce the amount of waste entering the system in the first place.

9. What We Still Don't Know

Although Tampa Bay has substantial litter-removal and monitoring activity, the available research does not provide a single, comprehensive picture of how much litter exists across the region, where it originates, or where the greatest concentrations of litter occur or originate. Existing programs cover different geographic areas, use different collection methods and report their findings using different measurements. Cleanup weights, individual-item counts and interceptor data are each useful, but they cannot simply be combined into one regional litter total.

Geographic coverage is also uneven. Some programs provide detailed information from individual storm drains, waterways or cleanup sites, while other areas are represented primarily by broader cleanup totals. A location with a large amount of collected debris may also be an accumulation point rather than a source. Stormwater, tides, wind and flowing water can transport litter before it is captured, making it difficult to determine exactly where an item originally entered the environment.

The available data also make it difficult to consistently distinguish specific consumer waste streams across the entire region. Some monitoring programs identify individual items such as water bottles, beverage bottles, bottle caps, food wrappers and cigarette butts, while others group material into broader categories such as plastic, glass or metal. As a result, the existing evidence can demonstrate that plastics are widespread without necessarily showing what percentage of that plastic consists of beverage containers, including water bottles.

Differences in sampling create another limitation. High-volume collection programs may characterize only a sample of the debris removed, while volunteer cleanup data depend on participants consistently identifying and recording individual items. Some programs measure debris by weight, others by item count, and some report both. These differences make direct comparisons between locations difficult without access to the underlying data and careful consideration of how each dataset was produced.^{1, 6}

There are also important questions about time. Cleanup totals may reflect a single event, while interceptor projects can monitor the same location repeatedly over months or years. The available datasets also raise questions about whether rainfall, storms, tourism, special events or seasonal changes in outdoor activity affect the amount and type of debris collected. A large collection on one day therefore does not necessarily establish that a location is a persistent litter hotspot.

Finally, existing monitoring tells us much more about what has already escaped into the environment than about the behaviors and systems that generated it. Additional research connecting litter observations with surrounding land use, pedestrian activity, recreation, businesses, events, stormwater infrastructure and access to reusable or waste-reducing alternatives could help identify where prevention efforts may have the greatest effect.

These gaps do not diminish the value of Tampa Bay's existing research. Instead, they show where the region's growing collection of litter data can be expanded, connected and used to ask more targeted questions about where waste originates, which types of waste are most preventable, and where interventions could stop litter before cleanup becomes necessary.

10. Key Takeaway

Trash in Tampa Bay is not confined to shorelines or waterways; it moves through a connected system. Litter discarded on land can travel through storm drains, creeks, rivers and canals before eventually reaching Tampa Bay and surrounding coastal waters. Local monitoring shows that plastics are a major component of this waste stream, alongside food packaging, cigarette waste, fishing-related debris, beverage containers and other everyday items.

Tampa Bay organizations are already addressing the problem at multiple stages. Cleanups remove debris from the environment, interceptors capture it before it travels farther downstream, and monitoring programs help researchers understand what is being found

and where. Together, these efforts demonstrate that preventing aquatic litter requires both removing what has already escaped and reducing what enters the system in the first place.

The more we understand about what Tampa Bay throws away, where it appears and how it gets there, the better equipped we are to stop it from becoming water pollution at all.

Sources & Further Reading

1. [Tampa Bay Estuary Program \(TBEP\) — Trash Free Waters](#)
2. [City of Tampa — Litter Skimmer FAQs](#)
3. [City of Tampa — Litter Skimmer Expansion](#)
4. [UF/IFAS — Operation TRAP Interactive Data Dashboard](#)
5. [EPA — Escaped Trash Assessment Protocol \(ETAP\)](#)
6. [UF/IFAS — A Year of Trash: Operation TRAP Turns 1](#)
7. [UF/IFAS — The Small Things Add Up](#)
8. [UF/IFAS — Operation TRAP: Intercepting Litter at the Source](#)
9. [Keep Tampa Bay Beautiful — Trash Free Waters](#)
10. [Keep Tampa Bay Beautiful — Hillsborough River & Coastal Cleanup](#)
11. [EPA — What You Can Do About Trash Pollution](#)
12. [EPA — Best Management Practices & Tools](#)